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ChemRisk Repros. No. 2048

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NOTEBOOK NO. A-328 EXCERPTS

Assigned to:

Harris Blauer

Department:

Operation

Location:

3037

Date:

2-26-52

ChemRisk Document No. 2048

67 off gas failed during dis. Schair mistake 8/24 day

ACTIVE

This document has been approved for release to the public by:

David R. Hannah 4/8/98
Technical Information Officer Date
ORNL Site

RUNS

- D.R. #8 (p. 66)
- D.R. #9 (p. 76)
- 47 (p. 94)
- D.R. #10 (p. 111)
- D.R. #11 (p. 112)
- 48 (p. 135)
- 49 (p. 174)

5-10-52

8-4

H.B.

1. Changed bottle on Pressley's Column at 11:15 A.M.
2. Power failure about 9:05 A.M. for about 10 minutes. After power was back on, started up electric fans, Cottrell, vacuum pump, distilled H₂O pump, and building fans.

5/12/
8-4
Scha

5-10-52 Check Pressley column. at 6:00 P.M. & 11:00 P.M.

1-12

5-11-52

12-8

Changed bottle on Pressley's column at 12:50 A.M.

DCK

5-11-52 Change bottle on Pressley's column at 3:45 P.M.

1-12 G.E. The lights are bad on pick up truck work
Same time

[DR#8]

1-Loaded 65 X Slugs, Removed Coats AND

5-12-52 started Dissolving, UP TO TEMP. AT 7:00 AM.

12-8 2-Inst's Replaced Battery IN TEMP. Recorder

R.L.N. P.B. #1

3-Washed out I¹³¹ Equipment.

4. Brought DOWN Pile units.

5. PH OF H-4 IS 116. Did Not Drain Filter Boxes, Metal Rec.
Had a Dissolving Started.7- The valve ON T-9 TANK Leaks Around
The Packing.

8 Pressley's Column Was OK. This Shift.

5/12/
4-1.
LAMP

9. Delivered 1st Slog Charges to The
Pile Bld'g.

1:15 AM.

~~To~~
started
stills

5/12/52 ① Installed W7 pump and started pumping
8-4 W7 back to W70. Three spargers operating. All finished
Schaich ② Continued evaporating.

* ③ Loaded nine FI slugs and started dissolving

④ Painters touching up ventilation duct work.

⑤ Off gas failed when Dissolving got up to Temp.

Turned on cooling water but still had high
air count. Found scrubber was too full. Drained
to C.T. and started running stills on it.
start dissolving when stills are finished.

⑥ Added Resin to column.

⑦ started Resin regeneration on 3rd level.

⑧ Dummy run still dissolving.

⑨ cleaned up hot spots at "D" Bldg.

⑩ Put hot FI carrier wires in Dec. Room.

1:15 AM.

1:15 AM.

4:15 AM.

4:15 AM.

Dec.

5/12/52 ① Finished 5 FI scrubber stills. Dissolving
4-12 coming up to Temperature. All stills in Rm 10.

Lampton ② Continued purification of sulfur.

③ Resin regeneration on 3rd level D Bldg. stopped
at 3 liter water addition.

④ Rala is digesting in A 9. Sample IMA -
60.98 slugs and 172 curies Ba S.T.

⑤ Continued evaporating

⑥ Instruments changed chart on Micromax A16
Panel board #2

⑦ Tested the feed tank valve and the feed tank

slowly filled. The amount in the feed tank did not equal the loss in the eluate tank.

1. Washed Down Cottrell Prec.

5-13-52 2. Continued Sulfen Purification.

12-8 3. Transferred Scrubber Still's FROM EV. IN R.L.N. ROOM 10 TO FLASK, DID NOT SAMPLE.

4. Brought Down 2 Sulfen Can.

5. Continued With T^{131} Dissolver Readings.

6. Continued With ^{Resin} Replenishment Ready

FOR 3.5 M HCl SECOND CYCLE AT SHIFT CHANGE

7. CONTINUED EVAPORATING, HAD TO LOWER LT.

TO 30" AND STEAM TO 45#.

8. MADE UP 3.0 M H₂O, IT HAS NOT BEEN SAMPLED

9. ACTIVE D.R. #8 EXTRACTION FILTRATION STILL

DIPPING THROUGH, P.F. FILTER # 2 SLOWED

DOWN TO .1 G/MIN TRIED BLOWING BACK WITH AIR BUT DIDN'T DO ANY GOOD, SO TRIED

P.F. # 1 RAN 17 GAL. THROUGH IT AND

IT LEVELED OFF AT .1 G/MIN SWITCHED

BACK TO P.F. # 2 TO FINISH FILTERING ~

4 GAL LEFT AT SHIFT CHANGE.

5/13/52 ① "D" Bldg. fire line is broken and water seeping into Cell A. Shut down fire water.

Schaich ② Ran steam turbines four hours.

③ Welded nozzle to WT pump line going into S. side of WT. WT pump kicks out when water on bearings is too low. A new rotameter

5/13

9-1

Lun.

5-1

12

R.

will be installed to find optimum conditions.

- ④ started jetting 1' from W10 to W7. Shut off when W10 reaches 6'7". Two spargers on.
- ⑤ Continued Resin regeneration. ^{H₂O in flask to go thru col.}
- ⑥ Riggers tying-in guy wires at S.B.
- ⑦ Instruments zeroed F.T. & P.E. tank.
- ⑧ Continued evaporating.
- ⑨ continued Rala run. Filtering last water wash at shift change
- ⑩ Lagoon reading 10 turns 11"
- ⑪ FI stills boiling down. Scrubber dropped and sampled.

5/13/52 ① Shut off jet from W10 to W7. W7 is circulating.

4-12 ② Continued resin regeneration. H₂O on column.

Lampton ③ Rala - The third metathesis is digesting after the water addition.

6WMA sample - 2.36 c's ST.

8WCI " - 0.049 c's ST.

The 6WMA is ready to be neutralized the solution for neutralization is 14 A5.

④ Finished FI scrubber stills. All product is in Rm. 10.

⑥ Continued evaporating.

5-13-52 1. Finished Boiling Down I¹³ AND SAMPLED F-7

12-8 2. TOOK UP P³² EXTRACTION AND STARTED ANOTHER

R.L.N. Boiling Down IN CRUDE EV.

3. Finished Resin Regeneration.

- 4 Made up 6 M HNO_3 sample in the Lab
- 5 Continued Re L2 Run, 1.5 M HNO_3 Elution
at shift change.
- 6 Had to sample waste from feed soln.
in M.W. Tanker ISO Tanks sampler does
not work.
- 7 A-6 Jet to A-5 would not pick^{up} so
we neutralized 6 MNA in A-6.
- 8 Jetted 11 $\frac{1}{2}$ " and 12 $\frac{1}{2}$ " from cell A SWAP
- 9 Jetted $\frac{1}{2}$ " from W-8 to W-5
- 10 Checked W-7 PUMP seems OK.

5/14/52 ① Pumping W7 backed to W10. Recirculating
8-4 while pumping.

Schaich ② Continued Dummy Run. sent all wastes
except F.T. Rinse & A9 Rinse to tank farm.
Running 9M HNO_3 thru column at 40ml/min.

③ #200 sample carrier will not operate on F.T.
but will operate on M.W.

④ A8-A5 DMA jet plugged.

⑤ Boiling 1st part of 9M HNO_3 in P.E. tank.
Boil to 5" L.L.

⑥ Still digging for "D" Bldg. spring.

⑦ Resampled A9 Rinse two more times.

⑧ Continued evaporating.

⑨ Loaded 8 FI slugs after difficulties at
canal. Up to temperature at shift change.

⑩ Riggers continued work at S.B. and lagoon^{#2}.

⑪ opened tuning nitric for precipitation. It
is in makeup room.

5/14

4-

Lamy

5-12

12-

R.L.

tion

(12) A cell samplers ^{carriers} sparging in dec. room.

21 N.

05

5/19/51 (1) Checked FI dissolving.

4-12 (2) P³² is in P-7 Lq. precipitation.

Lampton (3) Shut down pump W7 to W10.

(4) Cleaned A cell samplers and stored.

(5) Tried to use #200 cubicle sampler for PE-1 but it broke sample tube and pin stack.

(6) Jetted A9 Rinse W-16. Put one 8 gal water wash back through PF-2 to A9 to A8 via by-pass.

(7) Finished purification of sulfur.

(8) Bldg. 3001 is purging their canal.

(9) Rala - Running 2 liter fuming HNO₃ P.E. to MW filtration. PE-1 sample - 56.6 e's st.

(10) Made up 19 liters 3M HNO₃ and sampled. sample - 2.99 Molar. results.

(11) Continued evaporation.

Sump

9

-5

m.

in.

T.

t.

1. Finished D.R. # 8 DOWN THROUGH EVAP. 5-15-52 OF 6 LITERS OF WATER DOWN TO 0" ON LL. INS. 12-8 HOWEVER THE LL. CAME DOWN TO .1" AND R.L.N. STOPPED, STARTED ADDING WATER 50 ML SHOTS TO THE EV. IT TOOK 250 ML TO BRING LL. UP TO .2"

2. Finished THE CELL A RINSES, SHUT OFF Jet R.C.O.G AND A-16 WATER, P.B. 1 AND 2 SHUT DOWN.

e.

00 N #2.

(52) TW

- 5/16/42
- ① Instruments repaired EV probe lights.
 - 8-4 ② Jetting 1' from W10-W7 and recirculating.
 - Schnick ③ Brought 65# slugs to "D" Bldg.
 - ④ Finished resin regeneration.
 - ⑤ ~~Made up 20% $Pb(NO_3)_2$ + 40% K_2CO_3 .~~
 - ⑥ Added one carboy H_2SO_4 to W14.
 - ⑦ Switched 3026-C Bldg. to W18 tank.
 - ⑧ Made up 20% $Pb(NO_3)_2$, 40% K_2CO_3 , + 6M HNO_3
Brought 25# $K_2CO_3 \cdot 1\frac{1}{2}H_2O$ from stores. Change
make up calculations for this stuff.
 - ⑨ Millwrights started installation of pulley at
W7 to adjust height of return line spray.
 - ⑩ Got rid of old H_2SO_4 acid cases.
 - ⑪ Continued evaporating. Lowered L.L. to 30".
 - ⑫ Loaded 8 FI slugs and started dissolving
Finished run in Am 10.
 - ⑬ Made hot sink inspection.
 - ⑭ Cleaned up hot spots in ~~the~~ "D" Bldg locker
room after pipefitters unplugged drain with
snake.

5/16/52 ① Turned on A18, A19 + A20 condensers for
4-12 3 hours. Did not find any flow of water to
Lampton show a leak. Make up room or the hole in
the floor filled up.

- ② Shut off the jet W10 to W7. W7 read 3' $\frac{1}{2}$ "
started pumping W7 to W10
- ③ Checked FI dissolving
- ④ Checked and shut off Russel's ball mill.

- ⑤ Made up 1M HCl, 1M NaOH, 9M HNO₃, and 3M NaNO₃ solutions. Butted up 6M HNO₃ OK.
 1M HCl - 1.08M, 1M NaOH - OK, 9M HNO₃ - 8.8M
 3M NaNO₃ - sampled. 20% Pb(NO₃)₂ - 20.65%
 90% K₂CO₃ - 90.9%
- ⑥ Continued evaporating.

HNO₃ 5-17-52 12-8 H.B.
 1. Cut off slurry pump at W7 and flushed lines.
 at 2. Dumped run 1430 and started 1631 at evaporator.
 y.

5-17-52 PUMP 1' from W-10 to W-7 and sponged -
 30" 8.4 SEC and Pump Back to W-10 Blow out lines
 using and shut off Pumps. 2' 7 1/2 in W-7.
 Bought 1 caddy of Praxide from stores for I-131 Run.
 Changed from W-18 Back to W-17
 with Valve Broke on W-18 steam line could not set.

5-17-52 4-12.

to Started jet W10 to W7 at 4:30 PM,
 W10. LK at 11: PM, 7' 4" W7 LK 2' 7",
 jet is to be shut off when W10. LK is 6' 11"

5-18-52 12-8 H.B.

1. Cut off jet from W10 to W7 at 3:15 P.M.
 and started pumping slurry back to W10.

2. Wait. replaced red light at Cottrell pump.
3. Lights on the pickup truck went burn. have been driving without lights.

5-18-52 finished Pumping w-7 Back to w-10
 8-4 SEP started w-10 get back to w-7. 2'1" in
 w-7 at 3:22 P M

5-18-52 4-12

Shut off jet W10 to W7 at 9:45 PM
 W10 h.h. 7' W7 h.h. 2' 11 1/2". Started pumping
 back to W10 while also circulating
 in W7.

5/19
 8-9
 LAM

5/19/52 ① W18 steam valve stem sheared off at packing
 12-8 nut.

Schäick ② Drained Cell ventilation filter. 3505 using
 off gas.

③ Primed w-7 pump and pumped solution to
 W10. Started jetting 1' from W10-W7 one hour later. Shut off at 7'.

④ checked & labeled solutions. Butted up 9M
 HNO₃. Result 9.04 M. O.K.

⑤ Washed out FI cell. Probes still not operating.

⑥ loaded 65x slugs and started dissolving.

⑦ shut off W14 air sparger.

⑧ Maintenance repaired bolt lock on Cottrell fence
 gate. Wet & Dry bulb water is going into well but
 no liquid returns.

⑨ Brown recorder at EV for Telemetering system
 not operating properly as per note at EV.

DUMMY
 RUN
 #9

- P.
- ⑩ cleaned and stored three sample carriers and FI wires. one more carrier in Lab with sample.
 - ⑪ AI Sp.G. instrument off by .065. Did not have Instruments check.
 - ⑫ Took FI carrier to 3001 Bldg and brought down Pile units.
 - ⑬ Continued evaporating. 50" + 35"

- M
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Lampton
- King
- to
at 7.
4
ting.
7.
e
t
- 5/19/52 ① Lagoon reading 10 turns 10 inches.
 - ② Pipefitters started repair of W13 sampler.
 - ③ Loaded 8 X slugs for FI. Dissolving is up to temperature. Repaired FI crane.
 - ④ Instruments started repair on Telemetering system Brown recorder at E.V.
 - ⑤ Instrument repaired AI Sp.G instrument at 3026 D Bldg.
 - ⑥ Wet and Dry bulb water system is working all right at the stack.
 - ⑦ shut off jet from W10 to W7 and started pumping back to W10 from W7.
 - ⑧ Rala product is in A11 and ready for Crude filtration.
 - ⑨ Received Rala product carrier. It is in 3026 D and H.P. smeared and number 8 smear is only hot one.
 - ⑩ Continued hunt for leak in 3026 D bldg.
 - ⑪ Continued evaporating.
 - ⑫ Pickup truck is at garage
 - ⑬ Jetted 9" from W10. W7 read 2'10 1/2" when jet was stopped

5-19-52 1. TOM HAMMON CALLED IN AND WOULD LIKE
4-12 TO HAVE 200 ML SAMPLES ON THE DUNNY
R.L.N. RUN INSTEAD OF THE 100 ML THAT WAS FIRST
CALLED FOR.

2. JETTED H-10 TO H-7 FOR 5 HOURS H-10 L.L.
BEFORE STARTING THE JET WAS 8'±", H-7 ^{W10-7'8"} L.L.
BEFORE PUMPING BACK TO H-10 WAS 2'5"
PUMPING BACK TO H-10 AT SHIFT CHANGE.

3. CHECKED AND SHUT OFF RUSSENS BALL MILL.

4. CLEANED AND STORED TWO 200 CUBIC INCH SAMPLE
CARRIERS.

5. CLEANED THE HOT SPOT ON RA LA PRODUCT
CARRIER AND REASSEMBLED.

6. BROUGHT THE TWO PLUMBERS TAPES FROM
3026 BLDG TO DECON. BUILDING.

7. RA LA THE METAL WASTE + THREE WATER
WASTES ARE BEING JETTED FROM A-8 TO
A-5 OVER SHIFT CHANGE A-5 HAS THE Na_2CO_3

8. CONTINUED I¹³¹ READINGS.

9. THE ROTAMETER FOR H-7 PUMP HAS LOST
THE FLOW INDICATOR BALL, HE BROKE THE
COPPER CONNECTION ON THE OUTLET SIDE FOR
WATER FLOW. TO CHECK THAT THE BEARINGS
WERE GETTING WATER.

5/20/52 ① Washed down Cottrell precipitator.

12-8 ② Repaired W7 pump rotameter.

Schuch ③ Checked FI discharging.

④ Brought one sulfur can to 3032 Bldg.

⑤ Continued evaporating

like
my
first

⑥ Jetted W10-W7 for 5 hours. Pumping back to W10 at shift change. W10 - 8' 1/2" start, W10 - 7'-9" finish, and W7 - 2' 4".

⑦ D.R. #9 - 3rd Metathesis in progress.

L.L.

5/20/52

① First two stills FI finished to transfers 8-9 to go to room 10. Scrubber dropped and Lampton sampled

W.

W.P.L.

② Para product is in the feed tank.

③ Repaired W18 steam jet valve. W17 is off.

④ Jetted W10-W7 for 6 hours. Pumping W7 to W10 at shift change. Finished.

⑤ Ran steam turbines for 6 hours.

⑥ S.B. sampler is being repaired at shift change. The motor stopped running.

⑦ Continued repairs on W13 sampler

⑧ Found leak in tile pipe in floor of 3026 D bldg.

⑨ Continued evaporating.

⑩ Received Pick-up truck from garage had brakes and lights repaired

03

st

e

"

55

5-20-52 1. THE Settling Basin SAMPLER HAS REPAIRED
4-12 AT 4:00 P.M.

R.L.W. 2. CONTINUED ADDING LIQUID NITROGEN TO
MASSEYS COLD TRAP IN BLDG-3031

3. CHECKED RUSSELS BALL MILL AND SHUT OFF
AT 12:00

5-31-52 12-8

Instrument Right was call to start the flow meter at the S.B. it ~~was~~ ^{had} stopped at 3:AM

Made one transfer from W10 to W7 and back to W10, W10 LL at start 9'2", when jet was shut off 8'8", W7 LL 2', when pumped back to W10 9'2"

Changed bottles at Pressley's Col at 7:30 AM

5-31-52

8-4 1- Made Transfer from W10 to W7 and back from W7 back to W10.

W10 LL before = 9'2"

W10 LL after = 8'8"

W7 LL before going to W10 = 2'

W10 final LL = 9'2"

2- Changed bottle on Pressley's Column.

3- Took slug Loading Carrier up to Pile Bldg. Brought 1 load slugs down hill.

4- Made up 1st half Coating Renewal in A1.

5/31/52 ① Checked Pressley's column.

12-8 ② Jetted W10 to W7 for 6 hrs. Start W10 9'2"

③ Finish W10 - 8'9", W7 2' Pumped back to W10

④ Started loading W slugs for Rala. ²⁰⁰ 42 slugs have been loaded. 7 loads 7 slugs to go.

RUN
47

12-8
④-127
ampston

6/4
8-
sch

- ⑤ Instruments fixed flow meter at S.B.
 ⑥ Pilot valve tubing connection outside E.V. is leaking steam.

- 6/1/52 ① Finished loading slugs 231 total. Three left for I-131
 12-8 ② 1st coating removal rough. Lost off gas for Blower about 5 minutes. Did not heat tank. Reaction went by itself. No air activity. No lost volume from A-1
 ③ Had someone on 3rd level - no hot spots
 ④ Cleaned up carrier & delivered it back to 3019 Alley
 ⑤ Continued Evaporating. Reduced pressure to 40"
 ⑥ Jetted W₁₀ to W₇ & pumped W₇ back to W₁₀
 W₁₀ start 9'2 1/2" W₁₀ finish 8'9" W₇ level 2' before pumping back to W₁₀
 ⑦ NO radiation above background through cell wall near Tank A-1
 ⑧ Run Status - 3rd coating Removal in progress
 ⑨ Hoed off big truck
 ⑩ Repaired steam traps on coils C + E. 8-4 if possible have the pilot valve outside evap. repaired
 ⑪ 8-4 if possible move the air sparger in W-7 before starting spargers + jet this morning
 ⑫ Changed bottle on Pressley's column at 5:30 AM.

- 6/1/52 ① Jetted W₁₀ to W₇ & pumped back. W₁₀ L.L. start 9'3"
 8-4 W₁₀ L.L. finish 8'9 1/2", W₇ L.L. W₇ Pump is frozen.
 Schach ② Made up batch of Na₂CO₃ → A5.
 ③ Made up 900# NaOH in A-1 for 4% in A10.
 ④ Cut Evaporator to 200 gal/hr when 1st dissolving

started.

- ⑤ change bottle on Pressley's column.
- ⑥ Dumped HNO_3 acid.
- ⑦ Run status: A1 - Batch A dissolving
A5 - Batch of Na_2CO_3
- ⑧ Use calibrated cones for A cell sample. We have a stack of them.

6/1/52 ① Changed bottle on Pressley's column.

4-12 ② Could not get W7 pump started it kicks Lampton out. Electrician said pump acted as if grounded out.

③ Washed down Cottrell precipitator after A + B batch dissolvings.

④ Run status:

Batch A - Filtering of extraction cake.

Batch B - Going through crud filter.

Acid ready for A1 to start Batch C dissolving.

IMA sample - 26.6 slugs and approx 4095 Cs

⑤ A9 Hg manometer lost Hg and instruments replace.

⑥ Had to get guard and get rubber tubing for sample cones.

1- Washed out I¹³¹ Cell and loaded 1 H Slug

6/2/52 Ran TWO Coating Removals and started Dissolving

12-8 2- Washed Down Cottrell Prec. after Batch

R.L.N. C Dissolving.

6/2/52
12-8
CON.

6/2
8
SC

- 6/2/52 3 - Took PH of W-9 It is 8
 12-8 4 - Brought Pile units to Packing
 cont. 5 Had trouble Getting the Temp. UP on I¹³
 Dissolving. Opened Steam Control Valve
 ON Header Line enough to Get 18.5# PSI.
 ON Dissolver Jacket Got UP to 98° and Drifted
 back to 94°
6. Ra La IMB Results 6368 L.S.T. 43.6 Slags.
 Run status
- A-1 Batch D - Dissolving.
 A-5 Batch Na₂CO₃
 A-8 8WMB Holding for Lab Results
 A-9 8WMC EXTRACTION IN PROCESS.
 8WMA Results 8C'S L.S.T. Neutralized and
 Jetted to W-9.
 1MC Results 6900 C'S L.S.T. [Gump?]
7. Changed Bottles ON Prosslers Column.

- 6/2/52 ① Utility men repaired "D" Bldg. floor.
 8-4 ② Instruments reset Evap Tank L.L.
 schaid ③ Maintenance repair steam leak in make up room,
 replaced ~~W5~~ to Xmas tree jet valve, and repaired
 220# pilot reducer outside of evaporator.
- ④ Painters cocooned carrier.
 ⑤ W7 pump still frozen, will be pulled out this week.
 ⑥ Pipefitter cut 6" from W-10 dip leg and blanked
 off ventilation^{duct} drain line.
 ⑦ Repaired R.P. sampler. 4-12 please check.
 ⑧ Instruments repaired D.B. flowmeter.
 ⑨ sent pickup to garage to charge battery

replace seat covers, and repair window.

⑩ checked FI dissolving.

→ ⑪ There is 110# 60% HNO_3 in T-8 tank.
open now, ⑫ A17-A16 valve stuck in the open position

⑬ Run status: A1 - Batch E dissolving
A9 - Batch D H_2SO_4 going in.

A5, A6, A8, A11, A17 - MT
Crud filters - clean

⑭ Continued evaporating.

6/2/52 ① Washed down Cottrell precipitator after
4-12 Batch E dissolving

Lampton ② Specal C.T. sample Run 1650 - 193 C/ml

③ Checked FI dissolving.

④ Checked Massey's cold trap.

⑤ Picked up 4 Carboys HNO_3 at 205 Bldg.

⑥ Run status:

A1 Batch F dissolving

Batch E extraction filtering.

IME - 38.3 slugs + 6963 C's

⑦ The ventilation duct ~~is~~ valve is clean
and on the pad. across from decont bldg.

1. Brought Down 2 Sulfen C&N.

6/3/52 2. Finished Running Two stills, DROPPED

12.8 and sampled scrubber, Boiling down in
R.L.N. Room-10 at shift change. T13!

3. Continued adding liquid Nitrogen to
Cold trap in Bldg 3031.

4- Re La Run Status.

A-1 - Heel Dissolving on Batch-G, the SP. GN. IS NOT MOVING VERY FAST

A-9 Batch-F Filtering to A-8 over shift change

5- 8NND Results 294 S.T.

8NMF " 21 S.T.

1MF " 5150 S.T. 36.2 Slugs.

6- Washed Down Cottrell after Batch-F Dissolving.

7- We Need Ring Balance Charts for P.B#1 Instruments Couldn't find any on 12-8 shift.

8- Lowered Steam Header For Iodine Dissolver back down to Get 7.5# ON the Jacket.

6/3/52 ① Brought 2 cases 70% HNO_3 to "D" Bldg.

8-4 ② Instruments zeroed F.T., P.E. tank, column radiation Schwab chamber; repaired #1 Ring Balance clock, and brought Ring Balance charts to "D" Bldg.

③ Maintenance repaired W18 steam jet valve, W16 float, and W7 overhead jet hose.

④ Ran large steam turbine 3 hours until air count in 3026 Bldg. Small steam turbine to be shut down at 4 P.M.

⑤ Finished FI scrubber stills. Boiling down crude in Rm 10. Last cut came over acid.

⑥ start FI dissolving.

⑦ cleaned crud filters

⑧ Lagoon reading 10 turns $8\frac{1}{2}$ "

⑨ Clean & smeared floor in front of AB

blister twice. See H.P. for results.

- ⑩ Took special sludge readings on all large tanks on T.F.
- ⑪ Run status: A1 - Heel dissolving till 4:20 PM.
 A11 - 8WW sampled
 A9 - 1st Meta thesis
 A5, A6, A8, A17 - MT
- ⑫ set up RC-200 sampling equipment.
- ⑬ continued evaporating.
- ⑭ Placed H_2O on column from Feed tank.

6/3/52 ① Shut down small steam turbine.

7-12 ② Checked FI dissolving. P.B. Orr stopped Lampton run in room ten. Everything ready to go in room 10. FI sampled.

③ Took samples of Tank W3, W4, W5, W6, W7, W8, W10 at tank farm. They are sitting in a box on a manhole cover outside E.V. HP will pick them up in the morning.

④ Run Status:

A1 - heel dissolving

A11 - 8WW - approx 9000 c's hold.

A9 - 3rd metathesis cooling

⑤ Inblet samplers ready to go.

⑥ Continued evaporating.

⑦ Floor in front of A8 blister OK.

⑧ Special catch tank sample 206 counts.

1- CONTINUED WITH R2 L2 RUN, THROUGH
 12-8 Resin Cubicle, 9 M HNO₃ Ready to GO THROUGH
 6/4/52 COLUMN at Shift Change.

R.L.N. 2. R.C. 200 SAMPLER WILL NOT WORK ON THE
 FEED TANK.

3- TOOK UP P32 EXTRACTION E-1 AND STARTED
 RE EXTRACTION.

4- STARTED I¹³¹ IN ROOM-10 READY TO START
 TAKING CUTS at Shift Change.

5- INSTRUMENTS REPAIRED THE DISTILLATE REC-
 ACTIVITY INST. IN ROOM-10.

6 REMOVED SAMPLES OF TANK FANN TANKS
 FROM OUTSIDE EVAP. TO EVAP. GALLERY WHEN
 THE RAINS CAME.

6/4/52 ① shut down Isotope area offgas for 2 hours,
 8-4 Back on at shift change.

Schäich ② cleaned RC-200 samplers. Cell A samplers
 sparging in barrel.

③ AEC truck parked near of "D" Bldg. checked
 Product carrier. Everything O.K.

④ Opened fuming nitric.

⑤ Resampled A9 & FT Rinses.

⑥ H.P. said they would pick up tank
 samples today ??

⑦ Jetted A4-wastes to A5-W16, followed by
 water wash.

⑧ Maintenance repaired "D" Bldg leaks.

⑨ Washed down Cottrell.

⑩ Continued evaporating.

- ⑪ Run status: PE - PE-1 boiling down
 MW - Condensate
 FT x A9 - Rinses
 A11 - 8WW.

6/9/52 ① Sparging 1st & 2nd stills boiling down in
 9-12 Rm 10. Scrubber dropped and first still
 Lampton ready to go.

② Had two power failures ran steam turbines
 about an hour. Checked vacuum pump D bldg.
 Vacuum pump in Bldg 3039 and also the still
 water pump. Checked air conditioners Bldg
 3038. All OK. The automatic hot oil gas
 connection ~~was~~ paid off.

③ Took 1ml Ba sample to packing put behind
 barricade.

④ Run status:

MW - MW FN
 Hold up - 2 liter column water wash
 A9 - A9 Rinse
 F.T. - FT Rinse
 PEV - PE Rinse

⑤ Broke upper jacket rupture disk on ~~PE~~ PE
 ⑥ P³² is in P-1 try to get to EV-2 and shut down
 Run FI and let P³² go until tomorrow.

1- Finished evaporating ~~the~~ Rala Product to Dryness, Pulled Carrier out of Cubicle
 6/5/52 Reading 90 RHR @ 5' used all exposure
 12.8 time we had, also every one else we could
 R.L.N. Pick up over the plant cleaning the carrier.
 3026-D Floors are contaminated.

2- The product was a light brown color and was located in the tip end of the cone, very little on the sides of cone.

3- Started Boiling Down I¹³¹ in Room-10 but shut down for work on Rala.

4- Brought Down 1 H Slug for I¹³¹ but did not load, it is sitting on cart beside Cell Hall. Ready to load.

5- P32 Run was stopped in S-2.

6 Rala Product was loaded and ready to go at 7:45 AM.

6/5/52 I Rala status:
 8-4

1. Building scrubbed down waiting for smear results before proceeding with further scrubbing.

2. All cubicle tanks were H.T.'ed and rinsed.

3. Rinsing of Cell A tanks is in progress.

4. Cottrell precipitator washed down.

5. Fuel dissolving was sent to W-9, all other wash sent to W-16.

6. Finished 2nd Hayford slug Constan scrubber I¹³¹ stills. Boiled down

- 6/10/52 ① Installed new tube in Cottrell - operating 50 KW
8-9 ② Washed down cottrell precipitator.
Lampton ③ Continued decontamination of FI cell.
④ Ran steam turbines 9 hours.
⑤ Repaired W18 jet valve. Valves set to W18.
⑥ Loaded 65 slugs for dummy run #10. Acid being
added for dissolving at shift change.
⑦ Painter started pointing of valve pits on south
tank farm.
⑧ 65 slugs sitting on third floor of 3026 D bldg.
⑨ Truck repair finished both rear brakes relined,
grease seal replaced, hand brake lined, new
battery, and carburetor adjusted.
⑩ Butted up 13 M HNO₃ - ~~no~~ results 13.03 M
.07 M Na₂Ve₁ - 0.0715 and pH 6.35 OK.
not labeled.
⑪ Evaporator operating 30" L.L. and 37.5 lbs
pressure.

1. Decontaminated the floor buffer in 3026-D Bldg.
6/10/52 2. Continued with Dummy Run #10 Dissolving.
9-12 3. Continued with I¹³¹ Cell Decontamination
R.L.N. General Background ~ 5 R/HR IN Center of
Cell, the Hottest thing is the transfer
Line from UNH transfer Pot to Pressley's
Cell ~ 75 R/HR.
4. Millwright Repacked the Nitric acid ^{pump} ~~but~~
but it needs a new oil cup which he
could not find.

5. Unplugged Floor drains on third level
6. Policed up the North and South Tank Farm.

6/11/52 ① Bolts on E-1 extractor are getting chewed-up.
12-8 A/so E2. Took up P³² extractions and
Schaich started re-extractions. Bailing down crude
at shift change.

② Checked D.R.#10 dissolving and diluted at
6 A.M. Ready to go to A11 at shift change.

③ Continued evaporating.

④ Sprayed FI cell with HNO₃, versene, citric,
and caustic. Sparged dissolver with HNO₃ and
versene. Also washed out both transfer tanks
with HNO₃ & Versene. Drained UNH transfer tanks
with air pressure. This brought transfer lines
to 6 R. Versene in dissolver at shift change.
Should have caustic wash next.

Cell Readings: Catch Tank - 2.7R

Dist. Rec. - 1.8R

Waste Transfer - 4.5R

Side of Dissolver - 6.7R

Top of " - 3R

South side Wall - 10R

Drain - 10R

UNH Transfer lines - 6.3R

All readings taken
with paper shell
cutie pie from
the front door.

DR#11

6/11/52 ① Continued decontamination of FI cell.

8-9 ② Loaded 65 x slugs for Rala Dummy Run #11.

Campton Run #11 dissolving in A1

③ Dummy Run #10 status: Water washies going

through Process filter. First three finished.

- ④ Evaporator operating at 35° L.L and 30" pressure.
- ⑤ Maintenance started off-gas construction for 4500 area at the cottrell.

6/11/52 1. P³² Status, first 50 ml of water evaporating in quartz evaporator at shift change.

4-12 2. Continued with I¹³¹ cell clean up,

R.L.N. Dissolver Reading 5 R/HR.

South Wall " 5 R/HR.

Drain 5 R/HR.

General B.G. 2.5 R/HR.

3-Continued with D.R. # 11 Dissolving and D.R. # 10 Second meth. heating up in A-9 at shift change.

4. There is a steam leak at the Reducing station outside of Evaporator.

5. Made up 20 L K₂CO₃ 40.190

6/12/52 ① P³² in EV-2. Boiling down at shift change.

12-8 ② Sprayed FI cell walls all shift. General schleich background is anywhere from 1R to 2R. Hottest points on drain and south side of dissolver.

③ Continued evaporating.

④ D.R. #10 is digesting fuming nitric in A9
D.R. #11 is in A11. Ready for filter aid addition.

⑤ Did not make up remainder of K₂CO₃ (approx 18L)

6/12/52 ① Finished D Run #10. All samples in lab.
8-4 All wastes discarded.

② Started crud filtration on D. Run #11. It has been going since 1⁴⁰ P.M. awfully slow.

③ Started H₂SO₄ dissolving - at shift change

④ Replaced W17 float. It should ~~be~~ not hang up any more.

⑤ Replaced leaking pilot valve outside evaporator, and repairing bad steam line to coil "c" at shift change. Evap down 4 hours. Coil "c" not fixed - another hole in line

⑥ Diverted flow at S. Basin for 2 hours. only to have the workers rained out.

⑦ Fixed up HNO₃ pump by stealing grease fitting from Caustic pump. Do not pump any caustic.

⑧ Evap. has water in it for shielding.

6/12/52

4-12 1. Finished P32 Run and sampled.

2. Could not find the source of water filling N-1 & W-2.

3. Removed Paper from I¹³⁷ Cell and Replaced with Clean, also scrubbed and mopped the Galleries Between the Cell's ~~banks~~ ^{BANKS} SNEAKS were Reading up to 1 MR/HR.

4. Made up solutions in 3026 D

1. 90% H₂CO₃

2. 6 M HNO₃

3. 1 M NaOH

4. 13 M HNO₃

5. 2.5 M Na₂Acetate

all has been sampled

6/11
1.
50

6/11
8.

5- Finished with mud filtration after backwashing and pre coating two more times, found that the Ext. Handle for A-11 to C.F. Valve was slipping on the valve stem. Pulled it out and Tagged.

6- D.R. # 11 settling for 15 min. before being filtered to A-8 this is the Extraction filtration.

6/13/52 ① Washed down Cottrell.

17-8 ② H.P. resmeared "C" Bldg. It is O.K.

Schnick ③ Checked for leaks to W1 + W2, W18, & W12.

Somebody stopped W1 + 2 leak. Water running into "C" Bldg. hot sink. Found nothing in 3550.

④ Took special C.T. after lowering EV press. to 40".

It was 117 c's. Continued evaporating.

⑤ Lab results: 2.5M NaAc - 2.6M

1.0M NaOH - 1.02M OK

6M HNO₃ - 5.82M

13M " - 12.67M

Did not butt any of the bad ones.

⑥ Heel dissolving still going up so let it ride.

⑦ Held up D.R. #11 while butting up K₂CO₃.

At shift change, 1st Metathesis filtering.

Totted wastes to Tank Farm.

6/13/52 ① Diverted flow from S. Basin outlet weir while utility men put some more blocks around the manhole. Off 5 hours

8-4

② Fixed zoo sampler, decout. & stored

③ Neutralized & discarded A1 heels to W9

- ④ Started regeneration of new batch of resin. Filter plugged, had to clean up & start again
- ⑤ Continued D. Run #11
- ⑥ Weighed up filter aid
- ⑦ Removed crud filter cubicle manifold plug. Value ~~of~~ A-11 to C, F, is O.K. as far as can be determined.
- ⑧ metathesis dilution jig sent to glass shop for repairs. Be ready Monday.
- ⑨ Butted up 6.0 M HNO_3 - 5.98 O.K.
13.0 M HNO_3 - 13.31 Rebutted & sampled.
2.5 M NaAc - 2.5 M O.K.
- ⑩ Replaced headlight on truck
- ⑪ Removed hot dirt from W16, W17 & W18 area
- ⑫ Repaired point #5, W17 tank, Brown recorder at wap.
- ⑬ Raised pressure at wap. & lowered h.h. to 30"
- Finished first HCl & H_2O elution.
- ⑭ At shift change last metathesis is digesting prior to filtration.
- ⑮ Recalibrated A1 tank. It is right on the money now.

Summary

1. Metal Recovery Bldg, started flushing their Canal ~ 7:30 P.M. Shut off at shift change.
2. Finished D.R. # 11 and Jettcd all solutions to H-16, shut down all Panel Boards
3. Continued with Resin Regeneration, Ready for second 10 liters of 3.0M HNO_3 on first cycle.

on Saturday to finish up.

- ⑤ Rala coating removal ready to go.
- ⑥ Made hot sink check.
- ⑦ Tried out lead box for removing plug and loading carrier into loading cubicle. Worked fair.

6-28-52 12-8

6-28-52

8-4

BCK

1. Put 1st. Half coating Removal in A1 cooled down to 40°C . at 3:00 p.m.
2. Helped Inst. man on I³¹ sp. Hr. check on Ring Balance. Jetted H_2O out of diss. and put 4 litres of 70% HNO_3 in diss.
3. Brought down 1 load of Hanford slugs.
4. They broke the wire on I³¹ carrier and smashed the basket. Had to replace with new basket & wire pick up on second load.

RUN
48

6/28-52

4-12

Newton

1. Loaded 10 loads of slugs with one hanging in the slug chute, it was released without much trouble slug charger is at the pile and truck at D Bldg, at shift change.
2. Loaded one H slug for I³¹, removed coals and started dissolving.

- 6/29/52 ① Checked FI dissolving.
 12-8 ② Ralu Status: Finished loading slugs-219 in
 Lampton the dissolver.
 The second coating removal is
 in process.
 ③ & Cleaned slug charger and returned to
 bldg 3019.

- 6/29/52 ① Added 2 more liters of 70% HNO_3 to I131
 8-4 dissolving. Couldn't tell from run sheet whether the
 Blaney 4-12 had added correct amount for Hamped slug.
 L.H. acts plugged but the sp. gr. acts like
 it is just reaching of scale. Didn't call
 instrument man to steam out lines for fear
 he would cause a serious mishap such as
 happened before.
 ② Automatic valve at the wap leaks
 badly to the floor out the air vent line.
 Cut it off and operating manually by by-pass
 ③ Reduced steam pressure because the
 evap. is operating rough.
 ④ Dumped acids, made up 4% to NaOH
 finished coating removals.
 ⑤ Run Status.

A1 - 117A

All other tanks empty.

- ⑥ I131 L.H. ring balance completely screwy
 switched to a straight manometer.
 I believe the sp. gr. of the I131 is correct.

It is low because the extra 2 liters of HNO_3 we added were unnecessary, that - having been correct. The L.L. is the manometer reading $\times 3$. (Manometer reading times 3 = correct L.L. in I 13, dissolver). Sp of ring balance is correct.

⑦ Pipefitter repaired several leaky valves on
 Ray 3060 - leaking union at U10 tank on steam line
 ⑧ Steamed out lines at hot valves outside door of evap. Didn't do any good.

1- Continued with Rake Run first dissolving filtering from A-11 to A-17 Batch B

6/30/52 dissolving up to TEMP. at 11:35 PM.

4-12 2-Cut Evap. Back to ~ 200 G&I/Hr.

R.L.N-3- I 131 Backed up into L.L. & SP.G.R. & SPANGER
 line Reading 66 R/HR, Cleaned these lines
 out as much as we could, you still get
 $\sim 150-200$ HR/HR B.G. from the Rack of
 valves the SPANGER ~~and~~ and Ring Balance

6/30/52 ① Sampled FI scrubber. Washed out still
 12-8 and Dis. Rec.

Lampton ② Rake status. Batch B going through crud filters.
 Starting dissolving Batch C
 1MA - 42.6 slugs 9939 curies
 1MB - 40.3 slugs

③ Continued evaporating

④ Washed down cottrell precipitator.

⑤ PH WA 15 11

6/30/52 ① Received product pot from Los Alamos.
8-4 Hot as usual. Started decontamination
Blower of the carrier + parts.

② Finished extraction + filtration of
Batch B. Finished dissolving Batch C.
Started dissolving Batch D.

③ High Diod Box count for 7A14 + 11A.01.
Suspect leak in box West of 3026 c. possibly
The lab. is analyzing for I-131 + B. This was almost all B.

④ Repaired leaking union to steam jet at W10

⑤ Removed hot dirt from valves near doorway
to evap.

⑥ Rem Status A1 - 1 MD dissolving
A5 - Batch 7A2CO₂
A11 - 1 MC filtering to A17
A17 - Part of 1 MC
A8 - 8WMB Ready for A5
A9 - MT
Process filters - product.

⑦ Evap. going O.K.

⑧ ~~Re~~ Replaced leaking elbow on Tank A5
jacket vent line

⑨ Lagoon reading 10 turns 3 1/2"

⑩ Lab. results 1 MB - 742 C's

8WMB - 6 C's

1 MC ~ 6438 C's

⑪ New lagoon reading .35"

⑫ Washed down Cottrell after Batch
C dissolving.

6/30

4-1

R.L.

7/1

12

L.A.

1- Decontaminated the Product Carrier down to ~ 12 R/HR using oxalic Acid and HNO_3 . The Ring that is in decontamination room is OK, one small spot reads 66 MR/HR.

6/30/52 4-12 2- Took a sample of manhole # 149 it was R.L.N. 225 C/M/HR -

3- Instruments repaired the Ring Balance for I¹³¹.

4- Finished Running scrubber stills, Boiling down in room 10 at shift change

5. Rala Run status -

A-1 Batch E Dissolving.

A-5 Batch Na_2CO_3

A-8 Batch - C or sumc sample in Lab.

A-9 MT

Process Filters - Product.

A-11 Batch D Filtering to A-17

A-17 Part of Batch D.

6- Checked A-9 Vol. on Batch C after adding H_2SO_4 84 Gal. Checked after cooling down for filtration 83 Gal.

7/1/52 ① Decontaminated the Rala product carrier from 12 R/hr to less than 10 R/hr at contact. Lampton The threads seem to be the bad place. some spots are above 10 R/hr. Do not seem to be doing much good in getting it below 10 R.

② Brought a sulfur can to bldg 3032 from the pile bldg.

③ Finished boiling down FI scrubber stills. Did

not transfer it to the flash because of the heavy precipitate. Diluted slightly and left in evaporator

- ④ Washed down Cottrell precipitator after Batch E dissolving.
- ⑤ Rala status A1 - IME dissolving ed
 A5 - MT
 A8 & A9 - Batch D filtering through process filters.
 Process filters - product.
- ⑥ Lab. Results - BWMC - 17.8 curries.
 IME - sampled no results
- ⑦ Continued evaporating.

- 7/1/52
 8-4
 Blower
- ① Decontaminated Rala carrier threads to the point where painters could cocoon it. Threads 5 r/h. rest of the carrier 35 m/h maximum
- ② Lead burners started shilding valves outside the evap. door. These valves are from ~~the~~ 105 to X mas tree + main transfer line to X mas tree
- ③ Started operation of manhole #25 sampler.
- ④ Ran steam turbines 4 hours.
- ⑤ Painters masked + cocooned Rala carrier. Loaded it into loading cubicle using remote control shield. It works fairly well.
- ⑥ Rala status
 A1 - IME dissolving
 A4 - Batch E filtering
 A8 - Batch E waste receiving
 M1 - Batch Na₂CO₃.

- (7) ~~Started~~ Evaporator running O.K.
 (8) Started taking readings on Manhole #25.

1- TOOK UP P³² EXTRACTION at 9:00 P.M. there was only 400ml of it, Boiled down and started Re EXTRACTION after Replacing Gasket, also Replaced light Bulbs and Filter in the Hood

7/1/52 2- The Flow Instrument at M.H. #25 does not indicate the flow through the M.H. the inst. R.L.N. man says it is out of calibration.

3- Brought down the 1.5M NaOH and 1.0M HCl from Third level to Eluate Tank 2nd.

4 CONTINUED WITH INST READINGS the L.L. of SP, GR, INSTRUMENT IS OUT OF ORDER Could not get hold of INST MAN AT 11:25 P.M.

5- Rala Run status

A-1 MT

A-5 Batch K₂CO₃

A-9 Batch F Filtering slow to A-8

A-8 Part of Batch F.

7/2/52 ① Checked FI dissolving. Had instruments check Ring Balance but could not fix. The L.L. Lampton stays off scale when equalized.

② Took up P³² extraction the was 18000ml but reading 15 ml/hr. over the top of sample.

③ All the phones in 3026 D bldg are out of order

④ Rala Run status

A-1 MT

A-5 Batch K₂CO₃

A8 8WMF

A11 MT

A9 Product 1st Methesis

⑤ Continued evaporating

7/2/52 ① Dumped run at Evap + started another. It's going
8-4 O.K.

Blauer ② P.F.-2 plugged on 1st methesis filtration. Back
washed + blew back with air every 10 minutes - no
help. Finally switched to P.F.-1

③ Manhole #25 integrator out of order. No readings
taken. Instrument dep't is repairing at present.

④ A8 - 8WC }
A5 - 8WC }

A9 - 1st methesis filtering

Process Filter #1 & #2 product on both.

⑤ A5 was rinsed before the WC waste was put in.

7-2-52 1- Brought down the Slug Changer CHANGES
FROM 205 Bldg to 706-D.

9-12 2- 205 BUS sent down a man to clean up the Lead
R.L.N. shield to be used for loading the product

3- Finished Boiling down P32, and continued
through the Glassware Ready to Transfer
FROM P-1 transfer to S-2 at Shift Change.

4- Ran TWO scrubber stills Boiling down
in Room -10 transferred the first part of
the run to the flask.

PT

4-12 5. Rala Run status -

cont. A-5 8WC No Results Yet.

A-8 part of 8WC

A-9 3rd Meth. digesting 266H 78# water
at midnight.

7/3/52 ① P³² product is in P-2. 100ml of NaOH has been
12-8 added and the pH is still just a little
Lampton better than 2. Check acid addition conc
and amount. The correct amount called
for in the run book was added

② FI product is boiling down in crude
E.V. in Rm 10 at shift change. Had Had
trouble draining catch tank to still on
last scrubber still. Finished scrubber stills.

③ Rala status:

A-5 8WC 715 approx curies

A-8 8WCW - 576 curies

④ started to take Rala product to cubicle
when extension handle on PF-1 came loose.
Trying to get an extension that would fit
crapped up D bldg all over. Still can't get
PF-1 valve open. Removing shot from
around valve so extension can be put on.
~~scrubbed~~. Scrubbed down 1st. and 2nd floors.

⑤ Continued evaporation.

7/3/52 ① Put pump into W-7 tank

8-1 ② Verbally to 8-12 shift in regards to
Blauer Rala - H₂O solution at shift change

③ Product truck back of the bldg

④ Decord. 3026 bldg we hope.

- 1- Decontaminated the hot spots that 7/3/52 was turned over by H.P. had Bldg 9-12 Resmeared and found 11 more passed R.L.N. on to 12-8 shift.
- 2- Cleaned sample crucibles down to a reasonable level.
- 3- Finished P³² Run and continued with the other Run that was in progress.
- 4- Continued with R&L First part of product in PF TANK Second half in H TANK but Jet doesn't work.
- 5- Flute TANK has 2 liters of H₂O.

7/4/52 ① P³² product is boiling down in EV-3 at 12-8 shift change.

- Lampton ② Cleaned up hot spots on floor and resmeared all OK. Cleaned up some of the trash.
- ③ Took resample MWHClE and not sure of volume since condensate was filling tank Results of MWHClE is somewhere between 500 and 700 curies Lab is not sure
- ④ Ralo status - Last two liters of first filling HNO₃ filtering to M.W.
- ⑤ Couldn't find reason for WC-1 filling up.

7/4/52 ① Found leak into WC-1 from bldg 3024 6-4 hot sink.

Blauer ② Brought mop tank back to 3019 bldg

- ③ Checked all mops, brooms + buckets.
Discarded hot ones.
- ④ Decontaminated cell A sample carrier
+ stored
- ⑤ Discarded 5WC, 8WCW + cubicle wastes
to W16
- ⑥ Had a hot backup the P.E. purge line.
Had to shut off EV to M.W. jet because M. waste
was almost overflowing + jet wouldn't separate.
Added ice water + ran air through M.W. to A-E
jet wouldn't. Backup occurred when P.E. to M.W.
jet was shut off. Had to sample MCFN in
A8 as the 8W AEM because the volumes were
so high from buildups + filtrations that
M. waste wouldn't hold it.
- ⑦ Made up 9M HNO₃ - 8.98M D.K.
- ⑧ Backwashed both P.F.'s to A9 + by passed
to A8, 5 times each with 5 gallons of H₂O each
time.
- ⑨ Decontaminating hand rails on 1st, 2nd +
3rd floors as well as deck at P. B#, all shift. Values
handy on P. B# 2 are ^{beta run} ~~beta run~~
- ⑩ Shift change ready to transfer to product cone.
- ⑪ Finished P₃-run + submitted sample to
lab.
- ⑫ Replaced ~~noisy~~ valve ^{to} ~~at~~ A# cond# at wwp.
- ⑬ Still can't jet from M.W. to A8.

- 4-12 1. Transferred Ra²²⁶ Product to the Cone after
 7-4-52 several tries to get the Jet to work, the
 H.B. Two 100ML Water Rinses that follows the Product
 R.L.N. was put through after an hour of Evaporation.
 IN THE CONE
2. The Thermicouple for the Product Evap. is out of order.
 3. Cleaned up Two 200 Cubic Sample Carriers and stored.
 4. Finally got the Jet from M.H. to A-8 to working and Jetted all of Cubic tanks except P.E. Tank and Feed Tank to A-8 this stuff was Jetted A-8 to A-5 and sampled as 5 WFN.
 6. Ran a Water Wash of 90 Gal. Through A-1 All C.F. A-17 - A-9 A 8 to A-5 and started the second Wash through it is in A-17 on A-9.
 7. Had Inst. to Repair the Temperature Recorder at the Evaporation.
 8. Finished loading Product on the Truck and was ready to go at 1:00 A.M.
 9. The Hottest spot on the Carrier was 190MM on the sides.
 10. The Instrument used in counting the Product does not work.

5-4 A. There were 72 H slugs to be unloaded
 LONE from the Tuscon Carrier at Shift Change
 7-28-52 5. Dumped the first part of coating removal
 solution into A-1 the coils are turned
 off.

- 7/28/52 ① Pile Bldg. had trouble removing Tuscon from
 4-12 canal. Finally started loading at 7 PM. Have
 Schach loaded 106 at shift change. Load ready at 3001.
- ② Electrician repaired crane at 903 Bldg.
 Unloaded Chicago truck.
- ③ Loaded one W slug for FI. Scrubber to C.T.
 valve should be reworked. It will jam every
 time. Heat on FI dissolving.
- ④ Continued evaporating. Pipe fitter repacked
 steam valve to coils. Had to jet $\frac{1}{2}$ " from
 W8-W5 when Ev would not operate at pH-7.
- ⑤ One slot in charging machine basket is bent so
 badly the slug sticks. Filled this slot with a
 glove and loaded 15 each time.
- ⑥ Made check for leak into WC-1 with no success

7/29/52 ① Brought sulfur can from bldg 3001 to Bldg 3032
 12-8 ② Checked FI dissolving.
 Lampton ③ Found S.B. sampler Turned off at 3 AM.
 ④ Loaded 120 slugs making a total of 226
 in A1. Pile bldg was 9 slugs short but they
 found 9 slugs on bottom of canal which they
 loaded in charger. They figure somebody missed
 bucket when unloading

- ⑤ Finished 1st coating removal and ready for 2nd at shift change. Coating removal solutions in scale tanks for 2nd.
- ⑥ Washed down Cottrell precipitator.
- ⑦ Jetted CT to W5 all night high activity in C.T.

1- Ran Steam Turbines for 9 hours.

7-29-52 2- Pipefitter Plugged off the EV-U-6 Jet Line
8-4 inside the Evap. Gallery.

R.L.N. 3- Millwright is Repacking the Nitric Acid Pump at shift change.

4- Returned the Hanford Slug Changer to Pilot Plant.

5- Maint. Repaired a steam leak in the A-6 A-5 Jet line.

6- R&L Run Status, third coating removal til 4:05 PM.

7/29/52 ① Need Na_2CO_3 at W1 & 2 shed.

4-12 ② Changed conditions at EV by lowering L.L., Schleich raising L.L., lowering steam press., bringing new feed into EFT but conductivity recorder still goes to middle of scale when feed is coming in. Special C.T.s show this to be about 200 ds/min so continued run and ignored conductivity recorder. Lowered pressure to 18".

③ Made up Na_2CO_3 in A5 and batch of NaOH in M-1.

④ Did not check HNO_3 pump since repaired.

Millwright says it will probably have to be tightened after it is used.

⑤ Had H.P. smear Ev gallery and truck to determine source of hot hands. Sampler doors were hot. Scrubbed down.

⑥ Rala status: A1 - Batch B acid being added.
A11 - Batch A
A5 - Na_2CO_3

⑦ First two sparging stills boiling down in Run 10. Scrubber sampled and draining at shift. 2nd still cooling at shift change.

7/30/52 ① Took up P^{32} extraction at 12:00 PM and boiled down.

12-8 ② Finished 1st scrubber still of FI and 2nd Lampton still ready to go at shift change.

③ Raised evaporator steam press. to 25#. Took special C.T. sample - 129 c3/m.

④ Rala status: A1 - Batch C dissolving.

A17 - Batch B

Batch A filtering A9 to A8

900# NaOH - M1

A5 - Na_2CO_3

samples 1MA - 35.69 slugs - 10,549 cs A.T.

1MB - sample in lab

⑤ Valve V24 - CF-2 extension turns with out moving. The same trouble as in Run 48 on P.F.

Valve V40 P.F. to R.C. is the same as the CF-2 valve.

- ⑤ The S.B. flow recorder has stopped
 ⑥ Washed down Cottrell precipitator after Batch B dissolving.

1- Insts. Repaired the flow recorder at the S.B.

7/30/52 2- Inst. Repaired the SP, GR. ON A 6 8-9 Ring Balance.

Rm 10. still 3- Finished running the scrubber still's Boiled down and started through the glassware in Room-10, Ready for adding the acid to make 20% in flask Also loaded one H. Slag to 2131 Dissolver.

4- Rtd Run status.

A-1 IND Dissolving.

A-5 Batch Na_2CO_3

A-6 Neutralized Batch - A

A-9 Batch B Filtering to A-8

A-8 Receiving Batch - B

A-17 Batch C Ready for A-5

M-1 Batch of NaOH for M-10

7/30/52 ① Truck driver dropped one carton of gloves at "D" Bldg.

4-12 ② Washed down Cottrell.

schleich ③ Big truck lights are shot.

④ Finished FI run in Rm 10 and took up product. Delivered to packing Bldg.

⑤ Continued evaporating.

- ⑥ Run status: A1 - Batch E dissolving.
 A5 - Batch of Na_2CO_3
 M-1 - Batch of NaOH
 A6 + A11 - MT
 A17 - Batch D
 CF - clean. A9 - Filtering Batch C extraction
 A8 - Pwmc (Not sampled).

⑦ Boiled down crude P^{32} and started run thru glassware. Filtering from S-1 to S-1 transfer.

⑧ 8WMB - 10 c/s S.T.

⑨ Lights out at W16, R.P., and several on the outside "D" Bldg.

⑩ Cleaned Ev sampler down to 500-1000 c/s/m.

7/31/52 ① P^{32} product is in P-2 at shift change.

12-8 ② Found A9 steam and air sparger line trap Lampton above A9 sampler reading 200 R/hr at contact. Covered trap the best we could with lead but still have high background.

③ Run status:

- A1 - Batch F dissolving
 A17 - Batch E
 M1 - Batch Na_2CO_3
 A11, A5 - MT.
 A9 - Batch D filtering to A8
 CF - clean

④ Washed down Cottrell

⑤ A2 coil 2 is either plugged or gauge is not reading.

Condenser plugged?

7/31
8-
R.

⑥ Took special C.T. sample: results 630 $\mu\text{g/ml}$
 Dropped steam press back. Did not at
 first think this caused high D.B. Lower
 steam pressure at EV to 22 H and L.L. to 30"
 Took special C.T. in lab. Sampled M.H. 25
 results 11 $\mu\text{g/ml}$

① 8WMC - 7.74 c's ST.
 IME - 37.8 slugs

1- Installed Pumps at Manholes 25, 149
 and M.H. outside 3026-C Building.

7/31/82 2- Received the Rald Camien and started
 8-4 decontaminating. it reads ~ 350 MR/HR
 R.L.N. in spots smears 30,000 counts.

3- Rald Run status

A-1 Batch F Dissolving

A-5 MT

A-6 MT

A-9 Batch E Filling.

A-8 Receiving Batch E.

A-11 MT

A-17 MT

4- Manhole 149 sample at 11:00 AM. Ran
 ~ 4,000 C/M/ML

5- Took samples of 3026-C & 3026-C Bldg
 Process water outlets the samples ran
 29 C/M/ML for D Bldg and 4 C/M/ML for
 C Bldg.

- 7/31/52 ① H.P. reported aluminum adapters in 903 Bldg
4-12 smeared O.K.
- Schäich ② started Heel dissolving.
- ③ continued evaporating.
- ④ Discontinued sampling Mantrol 25, 3026-C,
and 3500. Continued sampling #149. Took
sample at #149 at 4:30 PM - 1800 cts/min. Closed
out valve pit west of "C" Bldg until 7:30 PM.
7:00 PM sample - 53,000 cts/min/ml. 8/1
12-
LUI
- ⑤ Swabbed outside of carrier till rough smear
just speeded up probe. Removed ring and
used shift exposure trying^{to} decontaminate
threads. Threads now read up to 2R/hr.
Removed lead plug and found a reading of 5R
over top. Did not try to remove cone. S.S.
cap is in decontamination room.
- ⑥ Would advise holding 8WME & 8WME in A5
and A6 until leak in pit can be repaired.
- ⑦ started P³² rework run thru glassware. Had to
use 3N HCl to dissolve Ca ppt. Also had to
assume P-158-C1B had 1000 mc's as lab results
showed 5700 mc's and the mistake is not in the
calculations. 12-8 Lab shift will re run this
sample. Regenerated S-2 and S-3. Product is
on S-2.
- ⑧ A8-A5B strainer got hot (OK) while jetting
A8-A5. Shielded with lead until pipetitter
can replace. 8/1
8-
- ⑨ Run status: A1 - Heel dissolving

Bldg

A5 - Neut. 8WME
 A7, A17, A11, A6 - MT
 A9 - Batch F extraction cooling.
 C.F. - cleaned.

8/1/52
 12-8
 Lampton
 near
 95
 d to
 atts
 the
 is

① P³² product is going from P-2 to S-3 head tank.
 P-158-C1B had 1100 mc's A.T.

② Washed down cottrell.

③ Continued sampling M.H. 149; 3 AM sample -
 5189 c/m/ml.

④ Continued decontamination of product carrier.
 swabbed the threads and got smears up to
 100 mr/m but did not bring it down below
 2 R/hr. Scrubbed cap which is still in
 decontamination room now reading 15 mr/m.

⑤ Rola status: A1 - Heel dissolving

A5 - MT

A6 - Neut. 8WME

A7-A8 - Batch F extraction filtering

A17 - MT

A11 - MT

8WME - 30.9 C's A.T.

⑥ Junction box sample and recorder east of
 3500 bldg. The recorder is not inking.

King
 Ter

8/1/52
 8-4

① Water from air conditioning compressors
 3026C picked out process system into the storm sewer
 I-lead Burners Removed & section of lead
 brick from Pit West of 706-C Bldg.

7/31/52 3. Hosed the Pit West of 706-C Bldg all shift Brought the Reading down from 8-1-52 5 RHR to 15 RHR at top of Pit.

8-4 4-Maint. Replaced the strainer in the COND. A-8 Jacket Water line.

5. Painters Covered the Product Carrier, 8/

6. The Re La Product Truck is Parked between 706-A and the Tank Farm.

7. Insts. zeroed the instruments to 200 cubic.

8. Re La Run status

A-9 First metal, water addition at shift change.

A-8 MT

A-1 A-1 Heels

A-5 Batch Na_2CO_3

A-6 6WHF has been sampled.

8/1/52 ① Found water running into "C" Bldg hot sim.

4-12 ② Dumped 100# Na_2CO_3 into valve pit west of Schaid "C" Bldg and hosed all shift. Down to 750nr.

③ Cleaned up sampling equipment and set up #200 cubic equipment.

④ Finished taking up p^{se} product and submitted samples to lab.

⑤ Continued evaporating.

⑥ Run status: A9 - 2nd Metathesis - Adding H_2

A17, A11, A8 - MT

A5 - SWC

A1 - Heels.

A6 - 6WHF

- ① MH #25 integrator not operating. 12-8 have instruments check motor.
- ② Use PF-1 filter!

8/2/52 ① Add versene to jet at east of 3026 P Bldg and continued washing.

② MH #25 integrator still not operating

③ Rala status: MW - I.T.F.E

Hold up = NaOH Elutros
 Eluate - 1.5 NaOH going to column
 A5 - SWC
 A6 - GWMF
 A1 - Heels
 A8 - 8WCW
 A9 - Versene Feed added to A9

④ Pile Bldg borrowed 2 carboys of HNO₃

⑤ 8WCW - Results - 126 c's

1- Insts, says the Integrator needs to be calibrated to the Chart.

2- Rala Run status.

8-2-52 A-1 Heels

8-9 A-5 SWC

R.L.N. A-6 GWMF

A-9 A-9 Rinse

A-8 Waste From Cubicle

A-11 8WCW + I.T.F.E.

3. Cubicle status Verbal to 4-12

8/2/52 ① Jetted all cell A wastes to W16 at 6 PM
4-12 to check chemical waste line. The 7 PM M.H
Schaich #199 was 17000 c/s/min. Must be metal waste
line. Poured 25# Nylon into pit and continued
washing.

② Did not repair A5-W16 gauge valve or vent
valve. Pipetitter had used exposure. There is a
120mr background around valves.

③ Raise steam pressure at evap. to 45#. Continue
evaporating.

④ The P.E. tank thermocouple has failed. Did
not try to replace as it got progressively hotter
as we pulled it out of weld. Instruments
believes the radiation broke down the insulation.
This occurs at the HTR regularly.

⑤ Cleaned up sampling equipment that was
available.

⑥ Run status: PE Tank - Adding Fuming HNO_3
M.W. - Boil down waste.

FT - FT Rinse

Iso x H - MT

A1 - Heels

A6 - SWMF

12-8 1- Pile Bldg. Started Punging their
8/3/52 Canal at 1:15 A.M.

R.L.N. 2- Washed Down Cobble PNEC.

3- Gathered up all the Equipment needed
for the Product Removal such as

- Gloves, MASK, MASKING TAPE, Towels etc.
4. MC-13 TANK is full.
 5. Made up and sampled 3M HNO_3
 6. Rala Run status, Second Fuming Nitric
Precipitation Filtering at Shift Change.

8/3/52 ① Continued raising steam pressure at evap.
8-4 Give it all it can take.

Schwich ② Found approximately 100 liters of solution
in the R.C. sump. After the jets cooled, sent
everything to A8 and sampled as 8WFN.

③ Delivered 1ml of PE-2 to packing barricade.
This will probably read 500R or better.

④ Run status: Washes evaporating in cone.

PE - 200ml fuming nitric.

A8 - 8WFN - approx - 1300 c's.

A1 - Heels

A6 - SWPPE

⑤ Made up 17 liters 9M HNO_3 for PE Rinse.
Does not have to be sampled.

⑥ 3M HNO_3 - 3.00 M.

8/3/52 ① The evaporator f was found to be
9-12 contaminated. Clean up but it should be
Lampton resmeared.

② Found a leak in G coil return line at the
Evaporator.

③ Rala status P.E. - P.E. Rinse.

A8 - 8WFN

A1 - Heels

Rala status cont'd. A6-8W MF

- ④ The product is in carner on A.E.C. Truck waiting for the drivers.
- ⑤ Cleaned up 3026 D Bldg. 1st floor. and it need to be smeared. I think the rest of the building is all right.
- ⑥ Did not wash cottrell down.

1. Washed down Cottrell Precipitator it Reads 8-4-52 1 R/HR East Side at the Fence and 600HR 12-8 ON the West Side.

R.L.N. 2-Turned off Water to A-16 Scrubben and R.C.O.G. Jet and A-20 Condensen Water.

3 Had H P Smead First Level of 3026-D The Exp. and Pick up Truck all smeads were OK.

4-Flushed M-4 and M-8 With Two Water Washes.

5- Washed out the I¹³¹ Dissolver but did not wash any other tanks, the Catch Tank has ~ 12 Litens of Solution in it didn't know what it was or if we should get rid of it.

6 Made up some solutions in 3026-D

- ①. 0.25 M Na Vens. Sample in the Lab.
- ②. 1.5 M NaOH
- ③. 1.0 M HCL
- ④. 9.0 M HNO₃
- ⑤. 3.0 M NaNO₃